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ABSTRACT

In its fourth year, Program Assistance for Neophytes (Project PAN) served 455 students at 2 high schools. The program provided support services and supplemental instruction to students of limited English proficiency (LEP) as well as English-proficient (EP) students. The project provided LEP students with a transitional period of bilingual education. Native language arts (NLA) classes were available for EP students deficient in their native languages. The project targeted students whose native languages were Chinese, Korean, Vietnamese, or Urdu, and provided English-as-a-Second-Language (ESL) and NLA instruction (in Chinese and Korean), as well as bilingual mathematics, science, social studies, and career classes. Staff and curriculum development activities and ESL for parents were also offered. Three mini-projects functioned within the larger project, two pairing LEP and EP students for peer tutoring and extracurricular activities, and one providing computer instruction. Objectives in ESL instruction, parent involvement, and attendance and one objective in NLA were met. Program strengths include the instructional components, curriculum development, and peer pairing. The major weakness was a lack of supplementary services in the native language for students who were not Chinese or Korean. (Author/MSE)

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# OREA Report

## EVALUATION SECTION REPORT

**PROGRAM ASSISTANCE FOR NEOPHYTES**
**PROJECT PAN**
**Grant Number G008525049**

**1988-89**

U.S. DEPARTMENT OF EDUCATION
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EVALUATION SECTION
John E. Schoener, Chief Administrator
April 1990

# EVALUATION SECTION REPORT

## PROGRAM ASSISTANCE FOR NEOPHYTES
## PROJECT PAN
## Grant Number G008525049

1988-89

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# PROGRAM ASSISTANCE FOR NEOPHYTES
# PROJECT PAN
# 1988-89

## EXECUTIVE SUMMARY*

- Project PAN was fully implemented. During the 1988-89 school year, participating students received instruction in English as a Second Language (E.S.L.), Native Language Arts (N.L.A.), bilingual content area subjects, and career education. The program offered support services to students, and staff development, curriculum development, and parental involvement activities.

- Project PAN met its objectives in E.S.L., N.L.A., attendance, and parental involvement. It met one of its objectives in content area courses but did not supply data to assess the other.

Program Assistance for Neophytes (Project PAN) completed its fourth year, the first of a two-year extension of an Elementary and Secondary Education Act (E.S.E.A.) Title VII funding cycle. The project served approximately 460 students at John Bowne and Newton High Schools in Queens. It provided support services and supplemental instruction to students of limited English proficiency (LEP students) and to those who were English proficient (EP students). Project PAN provided LEP students with a transitional period of bilingual education to them keep abreast of mainstream students in the content areas. Classes in Native Language Arts (N.L.A.) were available for EP students who were deficient in their native language.

The project targeted students whose native language was Chinese, Korean, Vietnamese, or Urdu. The project provided instruction in English as a Second Language (E.S.L.); N.L.A. in Chinese and Korean; bilingual mathematics, science, and social

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*This report is based on the "Program Assistance for Neophytes (Project PAN), 1988-89" prepared by the OREA Multicultural/Bilingual Education Evaluation Unit.

studies; and career classes. The project also offered staff and curriculum development activities as well as E.S.L. classes for parental involvement. Three mini-projects functioned within Project PAN: Projects Mimic and Chum paired LEP with EP students to facilitate English language learning through peer tutoring and extracurricular activities, and Project Compute provided students with computer instruction.

The project proposed objectives in E.S.L., N.L.A., parental involvement, and student attendance. One E.S.L. objective, related to improvement on the Language Assessment Battery, was modified by OREA because it could not be assessed as proposed. This modified objective was met. The other objective was related to performance on teacher-made tests, and it was also met. One N.L.A. objective was achieved, but OREA could not assess the second because of lack of data. The project met its objectives in parental involvement and attendance.

The strongest aspects of the program were its instructional components, curriculum development, and peer pairing of LEP and EP students. The weakest area was the lack of supplementary services in the native language for Asian students who were not Chinese or Korean. (This was also noted in last year's report.)

The conclusions, based on the findings of this evaluation, lead to the following recommendation:

- If funds permit, offer bilingual instruction for the Vietnamese and Urdu speakers in the program.

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PROGRAM ASSISTANCE FOR NEOPHYTES
PROJECT PAN
1988-89

SUMMARY


- Project PAN was fully implemented. During the 1988-89 school year, participating students received instruction in English as a Second Language (E.S.L.), Native Language Arts (N.L.A.), bilingual content area subjects, and career education. The program offered support services to students, and staff development, curriculum development, and parental involvement activities.

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Program Assistance for Neophytes (Project PAN) completed its fourth year, the first of a two-year extension of an Elementary and Secondary Education Act (E.S.E.A.) Title VII funding cycle. The project served approximately 460 students at John Bowne and Newton High Schools in Queens. It provided support services and supplemental instruction to students of limited English proficiency (LEP students) and to those who were English proficient (EP students). Project PAN provided LEP students with a transitional period of bilingual education to them keep abreast of mainstream students in the content areas. Classes in Native Language Arts (N.L.A.) were available for EP students who were deficient in their native language.

The project targeted students whose native language was Chinese, Korean, Vietnamese, or Urdu. The project provided instruction in English as a Second Language (E.S.L.); N.L.A. in Chinese and Korean; bilingual mathematics, science, and social studies; and career classes. The project also offered staff and curriculum development activities as well as E.S.L. classes for parental involvement. Three mini-projects functioned within Project PAN: Projects Mimic and Chum paired LEP with EP students to facilitate English language learning through peer tutoring and extracurricular activities, and Project Compute provided students with computer instruction.

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- If funds permit, offer bilingual instruction for the Vietnamese and Urdu speakers in the program.

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# I. INTRODUCTION

This report documents the Office of Research, Evaluation, and Assessment's (OREA's) evaluation of the Title VII funded project, Program Assistance for Neophytes (Project PAN). Project PAN, in its fourth year of funding, was a bilingual program that provided supplemental instruction and support services for students of limited English proficiency (LEP students) and of English proficiency (EP students). Its primary goal was to provide a transitional period of bilingual education to insure that the progress of LEP students paralleled that of mainstream students. Classes in Native Language Arts (N.L.A.) were available for those who were deficient in their native language. The project provided English as a Second Language (E.S.L.) classes for interested parents as well as curriculum and staff development activities.

## HISTORY OF THE PROGRAM

The final evaluation reports of 1986-87 and 1987-88 give a complete description of the history of the program. For program implementation and outcomes of objectives for previous years, see the evaluation reports for those years.

## SETTING

The project operated at John Bowne and Newtown High Schools in Queens. The areas in which the schools were situated had a large number of Chinese, Vietnamese, Korean, Indian and Pakistani residents.

PARTICIPATING STUDENTS

Program students came primarily from China, Hong Kong, Taiwan, Vietnam, Korea, India, and Pakistan. Among the Chinese, Vietnamese, and Pakistani groups there were many recent immigrants. Overall, more than 90 percent of the students had less than two years of education in the United States. Over half of them were over-age for their grade. (See Table 1.) Many students from the rural areas of mainland China had received limited education in their own language. Project students from Taiwan had the strongest educational backgrounds. According to the project director, most of the students lived in extremely crowded conditions. In most families, both parents worked, and 55 percent of the students worked after school.

STAFF

The program staff included a project director, a resource specialist/guidance counselor, a secretary, two educational assistants, a family assistant, and an educational associate. All worked full-time. The project director and the resource specialist both had Ph.D.s and were fluent in several dialects of Chinese. The secretary and the two educational assistants had master's degrees and were fluent in Chinese. The family assistant and the educational associate both had bachelor's degrees; one was fluent in Vietnamese, the other in Chinese.

The project director, who was also the director of Project BEACON (another Title VII-funded program), was responsible for

TABLE 1

Number of Program Students by Age and Grade[a]

| Age | Grade 9 | Grade 10 | Grade 11 | Grade 12 | Total |
|---|---|---|---|---|---|
| 13 | 1 | 0 | 0 | 0 | 1 |
| 14 | 21 | 2 | 0 | 0 | 23 |
| 15 | 32 | 18 | 0 | 1 | 51 |
| 16 | 16 | 50 | 10 | 1 | 77 |
| 17 | 3 | 55 | 47 | 8 | 113 |
| 18 | 2 | 32 | 46 | 16 | 96 |
| 19 | 1 | 14 | 24 | 23 | 62 |
| 20 | 0 | 7 | 8 | 10 | 25 |
| 21 | 0 | 0 | 2 | 2 | 4 |
| 22 | 0 | 2 | 0 | 1 | 3 |
| TOTAL | 76 | 180 | 137 | 62 | 455[b] |

Over-Age Students

| | | | | | |
|---|---|---|---|---|---|
| Number | 22 | 110 | 80 | 36 | 248 |
| Percent | 28.9 | 61.1 | 58.4 | 58.1 | 54.5 |

Note: Framed boxes indicate expected age range for grade.

[a]As of June 1989.

[b]Data were missing for eighteen students.

- Fifty-five percent of program students were over-age for their grade.

overall supervision. The resource specialist had a degree in counseling psychology and provided curriculum development, counseling, and guidance to Chinese-speaking students and also acted as an interpreter for other administrative personnel. The resource teachers provided computer-assisted instruction and assisted in curriculum development. The family assistant was responsible for family contact and translating. The educational associate worked on curriculum development on a per-session basis. The secretary provided clerical services for the project at the central office, located at John Bowne High School.

DELIVERY OF SERVICES

Students received instruction in E.S.L.; N.L.A. where available; bilingual and E.S.L. mathematics, science, and social studies; and E.S.L. career classes. In the mini-projects Mimic and Chum, Project PAN paired LEP with EP students to facilitate English-language learning through peer tutoring and extracurricular activities; the mini-project Compute provided computer instruction.

Additional services included counseling in Chinese, Vietnamese, and Korean; a monthly newsletter and E.S.L. classes for parents; and three culture clubs (Korean, Chinese, and Asian), which organized sporting events and other activities and published a club magazine. The project also engaged in a wide range of staff and curriculum development activities.

REPORT FORMAT

This report is organized as follows: Chapter II describes the evaluation methodology; Chapter III describes the implementation of the project and assesses its accomplishment of implementation objectives; Chapter IV presents an analysis of the student outcome data; Chapter V offers conclusions and recommendations based upon the results of the evaluation.

## II. EVALUATION METHODOLOGY

### EVALUATION QUESTIONS

The evaluation assessed two major areas: program implementation and outcomes. Evaluation questions included the following:

#### Process/Implementation

- Did the project select students for program participation according to specific criteria?
- Did the project implement instructional activities for developing English Language proficiency as proposed?
- Did the project implement instructional activities for developing native language skills as proposed?
- Did the project implement bilingual and E.S.L. instruction in the content areas of mathematics, science, and social studies?

#### Outcome

- What was the average Normal Curve Equivalent (N.C.E.) gain on the Language Assessment Battery (LAB)?
- What percent of program students passed their courses in E.S.L.?
- What percent of program students passed their courses in N.L.A.?
- What percent of program students passed their courses in mathematics, science, social studies, and career classes?
- How did the passing rate on translated Regents examinations in science and social studies of program students compare with that of mainstream students?
- How did the attendance rate of program students compare with that of mainstream students?

## EVALUATION PROCEDURES

### Sample

An OREA field consultant visited both program sites. He observed four classes, and interviewed the project director, the resource specialist/guidance counselor, and the principals at both sites. OREA provided a student data form for each student. The project returned 384 completed forms in the fall and 445 in the spring.

### Instruments

OREA developed an interview and observation schedule for the use of the field consultant and a questionnaire for the project director. Project personnel used OREA-developed data retrieval forms to report student demographic, attendance, and achievement data.

### Data Collection

The consultant interviewed school and program staff and observed classes during a four-month period from February to May 1989. OREA distributed the project director questionnaire and student data forms to the program director in January and April and collected them at the end of February and June.

### Data Analysis

OREA used the Language Assessment Battery (LAB) to assess improvement in English proficiency. Project PAN students were tested at grade level each spring. Students' raw scores were converted to Normal Curve Equivalent (N.C.E.) scores, which have

multiple advantages over other scoring methods. They are standard, normalized, and form an equal-interval scale. ("Standard" indicates that the unit of measurement is a fraction of the standard deviation of the original distribution of raw scores; "normalized" refers to the fact that the scale is adjusted for the norm group so that its distribution has the shape of a normal distribution; and "equal interval scales" allow for legitimate aggregation or averaging of scores.) Project students' N.C.E.s indicated their standing in relation to the national average of 50.

To assess the significance of students' achievement in English, OREA computed a correlated *t*-test on LAB N.C.E. scores. The *t*-test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected by chance variation alone.

To insure representative achievement data, OREA included only those students who had been in the program for at least five months and had attended classes for at least 100 school days. OREA extrapolated to estimate full-year scores of late-arriving and early-exiting students.

Limitations

Since all LEP students are entitled to receive bilingual and E.S.L. services, OREA was unable to select an equivalent control group. However, the use of two sets of data, as outlined above, served in lieu of a control group.

## III. EVALUATION FINDINGS: IMPLEMENTATION

Project PAN provided students with instruction in E.S.L., N.L.A., content area subjects taught bilingually or with an E.S.L. approach, and career classes. The project provided staff development, curriculum development, and E.S.L. classes for parents. Mini-projects provided peer tutoring and computer instruction.

### STUDENT PLACEMENT AND PROGRAMMING

The project targeted Chinese, Vietnamese, Korean, and Urdu speakers classified as LEP and a small number of EP students who wished to learn the language and culture of their ethnic group. The project staff chose the LEP participants on the basis of LAB test scores and school records. Project staff and school principals recommended EP students for participation.

Students were programmed for a two-year sequence of bilingual content area and E.S.L. courses, usually beginning in the ninth grade. The project director noted that twelve percent of the project students were mainstreamed in the fall of 1988 and had done quite well. After two years in the program, if the student still scored below the twenty-first percentile on the LAB, he or she was placed in the foreign students program, which offered special classes taught in simplified English in each subject area.

Students deficient in their native language took a two-year sequence of N.L.A. courses.

## INSTRUCTIONAL ACTIVITIES

Instructional activities included E.S.L., N.L.A., content area subjects, and career education classes.

### English as a Second Language

The project provided four levels of E.S.L. classes (elementary, intermediate, advanced, and transitional). The advanced and transitional levels were English for Foreign Students classes; they were available to both EP and LEP students.

At John Bowne High School, the field consultant observed an E.S.L. class. Students wrote homework dialogue questions on the board. The teacher then referred the class to their books and asked them to practice the dialogues with their partners for five to ten minutes. As they spoke with each other, the teacher moved among them, listening, offering feedback, and participating. He then listed appropriate phrases covering a variety of situations. The students worked at their desks on material similar to the boardwork. After the teacher reviewed the work, the students practiced the dialogues in pairs.

### Native Language Arts

The project provided elementary, intermediate, and advanced levels of N.L.A. classes in Chinese and Korean for both native and non-native speakers at the two high schools.

Content Area Subjects

The project provided bilingual content area classes. It offered global history, American history, government, general science, and biology in Chinese, and global history and biology in Korean. The field consultant observed three of these classes.

Project PAN also offered mathematics, science, social studies, speech, and typing courses, all taught with an E.S.L. methodology.

The Unified Science class at John Bowne High School began with the paraprofessional collecting the previous day's homework. The teacher wrote the new homework assignment on the board, asked if there were any questions, and began the day's topic, the geographical North Pole. After giving some background, she wrote "How do we describe the magnetic nature of the Earth?" on the board. She used English to write names and dates. She paused in her lecture to answer questions, restated and summarized the main points in English, and asked students to respond in English. During this time, the paraprofessional looked over the homework papers.

In the biology class at Newtown High School, the teacher began by passing out a list of biological terms with their Chinese translations. He had a few students pronounce the terms aloud. He discussed, in English, the structure of seeds and fruits. He took out some actual seeds and fruits and demonstrated the differences between them. A few students went to the board to diagram the structure of a lima bean. The

teacher summarized, listing parts, and asked a student to define the function of each part on the board (in Chinese). The class went on to another subject and ended with a discussion of the homework assignment.

The OREA consultant observed a class in government at the same school. The main thrust of the session was how candidates win elections. The format of the lesson was question-and-answer, mostly in Mandarin and Cantonese. Toward the end of the session, students wrote key concepts and vocabulary on the board in English and Chinese.

## NONINSTRUCTIONAL ACTIVITIES

Project PAN provided support services for students and staff, curriculum development, and parental involvement activities.

### Support Services

Counseling. The project provided counseling in Chinese, Vietnamese, and Korean. This included orientation for new students, academic evaluations, and college and career advisement. It provided translation services for school personnel who worked with these students.

Peer Tutoring. Project PAN established the mini-projects Mimic and Chum to provide peer tutoring. EP students had the chance to practice their chosen language while helping LEP students with English and content area subjects. Six staff members, three at each site, supervised each tutoring session.

Students responded with enthusiasm, and one-third of them participated.

Field Trips. Participating students took field trips to the Brooklyn Botanical Gardens, the New York Aquarium, the Old Bethpage Village Restoration, and the Planting Fields Arboretum at Oyster Bay. Students also attended a career conference at Queensborough Community College.

Culture Clubs. Students could participate in the activities of culture clubs (Chinese Culture Club, Korean Culture Club, Asian Culture Club). These organized various sporting and cultural events.

Computer Skills. A third mini-project, Project Compute, made a computer lab or the equivalent available to Project PAN students. Assisted by both a bilingual paraprofessional and a content area teacher, students could work on mathematics, science, and social studies.

## Staff Development

Staff development activities included attendance at workshops on child abuse and neglect, cultural conflicts, and acculturation. Staff also attended a New York Multifunctional Resource workshop.

## Curriculum Development

Project staff developed computer software for the biology and global history Regents examinations. They completed a

Newtown High School Handbook in Chinese, and were in the process of completing such a handbook in Korean and Vietnamese.

Parental Involvement

The program objective for parental involvement was:

- The program will offer E.S.L. classes for parents once a week.

The project offered four weekly hour-long E.S.L. classes for families of project students. Over 200 adults attended. Project PAN met its parental involvement objective.

The project also sent families monthly newsletters in Chinese, Korean, and Spanish. Parents attended an introduction to and discussion of available financial aid for college, an International Food Festival, a career workshop, Parents Day/Night, and meetings of the Parents' Advisory Council (PAC).

## IV. EVALUATION FINDINGS: OUTCOMES

### INSTRUCTIONAL ACTIVITIES

Project PAN proposed instructional objectives in E.S.L., N.L.A., content area subjects, and career classes.

### English as a Second Language

The evaluation objectives for English language development were:

- As a result of participating in the program, E.S.L. students will master an average of one E.S.L. curriculum objective per 20 days as indicated on the appropriate level of the LAB.
- At least 70 percent of the students will score at or above the passing criterion of 65 in second language classes.

Since the LAB is not a criterion referenced test, it was impossible to evaluate the first E.S.L. objective as stated. In lieu of this, OREA looked at pretest/posttest differences on the LAB to determine whether students had acquired a significant amount of skill in English over the course of the program year. Complete LAB scores were available for 226 students. (See Table 2). The mean N.C.E. gain was 6.4 (s.d.: 10.8), which was statistically significant ($p<.05$).

Students' performance in teacher-made tests was also very good: 93 percent of 262 students in the fall and 88 percent of 260 students in the spring achieved the passing criterion of 65 percent. The project met its second E.S.L. objective.

TABLE 2

Pretest/Posttest N.C.E. Differences on the Language Assessment Battery by Grade

| Grade | Number of Students | Pretest Mean | Pretest S.D. | Posttest Mean | Posttest S.D. | Difference Mean | Difference S.D. | t value |
|---|---|---|---|---|---|---|---|---|
| 9 | 36 | 9.6 | 12.1 | 22.6 | 12.2 | 13.0 | 10.1 | 7.71* |
| 10 | 99 | 13.7 | 11.3 | 18.8 | 11.4 | 5.1 | 7.3 | 7.03* |
| 11 | 64 | 17.3 | 11.4 | 23.8 | 13.9 | 6.5 | 14.6 | 3.58* |
| 12 | 27 | 15.9 | 7.9 | 18.0 | 7.8 | 2.1 | 8.0 | 1.38 |
| High School | | | | | | | | |
| John Bowne | 101 | 17.2 | 11.5 | 21.2 | 12.5 | 4.0 | 7.4 | 5.49* |
| Newtown | 125 | 12.0 | 10.6 | 20.3 | 11.8 | 8.3 | 12.5 | 7.42* |
| TOTAL | 226 | 14.3 | 11.3 | 20.7 | 12.1 | 6.4 | 10.8 | 8.97* |

* $p<.05$

- Students in all grades but twelfth, and overall, made statistically significant gains.
- Students at both schools made statistically significant gains.

Native Language Arts

The evaluation objective for the development of native language skills was:

- At least 70 percent of the students will score at or above the passing criterion of 65 in native language classes.

Ninety-eight percent of 203 students who took N.L.A. classes in the fall and 94 percent of 214 students who took them in the spring, achieved the passing rate of 65 percent. Therefore, the project met its N.L.A. objective.

Content Area Subjects and Career Classes

The evaluation objectives for content area subjects and career classes were:

- At least 70 percent of the students will score at or above the passing criterion of 65 in mathematics, science, social studies, and career classes, as indicated by final course grades.
- Program students will have equal or higher passing rates than mainstream students in translated Regents examinations in science and social studies.

Project students surpassed the passing criterion in every area. The percentage of students passing ranged from 83.1 in mathematics in the fall to 100 percent in career courses in the spring. (see Table 3.) Project PAN met its first content area and career classes objective.

OREA could not assess the second objective because the project did not submit data.

TABLE 3

Passing Rates in Content Area Subjects

| Subject | Fall | | Spring | |
|---|---|---|---|---|
| | Number of Students | Percent Passing | Number of Students | Percent Passing |
| Mathematics | 71 | 83.1 | 31 | 93.5 |
| Science | 220 | 93.2 | 164 | 87.8 |
| Social Studies | 232 | 94.8 | 191 | 86.4 |
| Career Courses | 43 | 95.3 | 17 | 100.0 |

- More than 80 percent of the students achieved the passing rate in all areas.

## NONINSTRUCTIONAL ACTIVITIES

The project posed a noninstructional outcome objective in attendance.

### Attendance

The evaluation objective for attendance was:

- As a result of participating in the program, students' attendance will be significantly higher than the attendance of mainstream students.

OREA used a *z*-test for the significance of a proportion to assess this objective. This procedure determines whether the difference between one proportion (the program's attendance) and a standard proportion (the school's attendance) is greater than can be expected by chance variation. The attendance rate for program students at John Bowne High School was 97.1 percent and at Newtown High School was 96.6 percent. Comparisons with the schools' attendance of 86.7 and 85.7 yielded $z=3.85$ and $z=3.86$ respectively, which were statistically significant ($p<.05$). The project met its attendance objective.

## V. CONCLUSIONS AND RECOMMENDATION

Project PAN identified, selected, and programmed LEP students into a series of E.S.L., N.L.A., content area, and career education classes. The project also offered services to a small number of EP students interested in learning the language of their native culture. Project PAN provided support services to students; staff and curriculum development activities; and parental involvement activities, including E.S.L. classes, workshops, and PAC and other meetings. The project also disseminated a monthly newsletter in Chinese, Korean, and Spanish.

Project PAN met its objectives in E.S.L. by significantly improving students' skills in English, as indicated by LAB and teacher-made test scores. The project also met its N.L.A. objectives, since at least 94 percent of the program students achieved the passing criterion of 65 percent. It met one objective in the content areas (for 70 percent of the students to achieve passing grades) but did not submit data for OREA to assess the second objective.

Project PAN met the objective in parent involvement calling for the provision of E.S.L. classes for families of participating students. It also met the attendance objective, since program students had a higher attendance rate than students schoolwide.

An interesting feature of the project was its use of mini-projects--Projects Mimic, Chum, and Compute. These allowed LEP and EP students to help each other by addressing each other's

strengths and weaknesses through peer tutoring, and the computer assisted students with language skill development and content area courses.

Any shortcoming that can be found with the project was related to its predominantly Chinese and Korean focus. While there were far fewer speakers of languages other than Chinese and Korean in the program, they would have benefited from bilingual counseling and content area instruction.

The conclusions, based on the findings of this evaluation, lead to the following recommendation:

- If funds permit, offer bilingual instruction for the Vietnamese and Urdu speakers in the program.